New Serials, New Roles, New Issues?

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Abstract:

This paper examines new developments in serials publishing and what they mean for libraries. It discusses conventional electronic publications with newer twists and open access publications. Roles, challenges and issues for libraries performing the traditional tasks of acquiring, providing access to, archiving and preservation of these enhanced resources, as well as new roles, responsibilities, challenges and issues for libraries related to scholarly communication initiatives are scrutinized. The author argues that library roles in publishing, providing access to and preservation of enhanced continuing resources are important and evolving rapidly. It is suggested that it is important for libraries to examine significant developments in serials publishing, to offer solutions to issues that arise, and to develop new or enhanced partnerships with stakeholders when appropriate.

Introduction

The twenty-first century is definitely an exciting time to be involved with serials and other continuing resources. Our world is evolving and changing rapidly. A decade or more ago, many of us became highly involved in the transformation from print to electronic

resources. Moving from the print to electronic sphere seemed to be the most defining and important event that could possibly take place to shape our careers and the information world. Librarians and others involved in the serials industry continue to work somewhere along a continuum in the shift from the print to electronic environment that is transforming our planet. New developments in serials publishing are impacting on library collections, access and preservation however, and we are no longer just making the transition from print to electronic resources. Libraries and librarians are moving past providing access to simple electronic publications to new and enhanced roles. A basic electronic journal is now a traditional electronic publication for many of us and our responsibilities in publishing, providing access to and preservation of enriched continuing resources are evolving rapidly. Our already stimulating environment continues to change and challenge us. This paper presents some of the many new serials, new roles and issues for serialists. What sums it all up is many and multiple serials, roles and issues but libraries and librarians are well suited to meet the challenges.

New Serials

New developments and ideas in serials publishing, both at the journal and article level, include electronic publications with newer twists, enrichments and enhancements for researchers and scholars. Publishers and others are experimenting with a variety of technological innovations and enrichments. Enhancements are now available in traditional and open access publications from many large and small publishers. Innovations and changes impact on article and journal content, context, peer review and feedback, discovery, linked data, layout, access, delivery, storage and preservation.[1]

Content

There is a huge range of different medias and special features presented in enhanced journals to enrich the content of articles. Some of the many features include videos or soundclips of varying lengths for many different purposes. Some of the videos and soundclips are abstracts where authors discuss their research findings, or provide an overview of their work. Some are longer presentations of experiments, music, procedures, case studies or other information that is best presented in audio and/or visual form. Sometimes videos are streamed and presented as the main body of the article or the entire journal is in video format (Alexander Street Press; JoVE), but often the videos are additional content, either embedded in the article, behind other content

[1] The presentation will include demonstrations of several of the new features using examples from several publishers websites including Elsevier's Article of the Future, Springer Healthcare, JoVE, PLos, Nature, Alexander Street Press and others (Elsevier 2012; Springer 2010; JoVE; PLos)

and accessed by clicking on a link, or as additional content separate from the article and sometimes in a different location on the web. Animations are also incorporated into articles as summary pictures to quickly grasp the attention of users, or to enhance the content in some other way. Interactive Google maps, three dimensional features, various diagrams, figures, charts, math formula, tables, plates and case studies of various types,often as mouseover features, are now included in online publications to enhance content and clarify material for users. Summary sections and slides, powerpoint presentations and interactive quizzes are also becoming common features added to many publications (Elsevier 2012; Springer 2010).

Context

In addition to rich content features, new serials often have new features or enhanced features to help the user place the materials presented in context. Some enhanced features include expanded abstracts, keywords, and outlines of special features contained in articles. Direct links to references found in articles are becoming quite common as are links to definitions, author websites, suppliers websites, organizations and other pertinent enriching information about the material presented that is not included in the main article. Detailed information about research methods, references, and findings, three dimensional models of chemical molecules and compounds, geological models and stereo paleontology models, fossil reconstructions, taxonomies, knowledge trees, photos, experiment details, formulas, statistical details, expanded graphs, tables, diagrams and flowcharts, posters, presentations, author biographies that cannot be included in the article itself are some of the many features added as sidebars and linked to external sources. Features are only limited by an author's or publisher's imagination. Links to databases, data repositories, spreadsheets and other datasets upon which the material presented in articles is based, are now included in many publications in order to present the full context of articles. Links to external sources are often presented as hyperlinks to the material but actionable QR codes are also appearing as links to supplemental material or to databases (Elsevier 2012; Springer 2010; De Schutter 2010)

Peer Review and Feedback

Web 2.0 social networking features for user interaction and feedback are also becoming common features of many new serials. Facebook, flickr, twitter, you tube, blogs, wikis and other social feedback features are gaining importance for many serials at the article level, journal level or on the publishers website. The use of social networking capabilites pre-publication provides researchers with multiple opportunities for collaboration, feedback and rapid dessimination of information related to their work. Web 2.0 pre and post publication peer review, journal and article rating and updating are now becoming

important features for many publications. Some articles or updates are in fact only published and revised using social media. Social media permit rapid feedback to authors and publishers (Cassella and Calvi 2010; Public Library of Science; D. (University of O. Shotton 2012).

Discovery

Along with new serials come new or enhanced metadata requirements for discovery. All enriching material and social networking features connected to a serial or article that provide additional content, context or interaction, must have connected machine readable metadata, in order for related materials, documents or conversations to be accessible and linked to an article in a meaningful way. Many new standards of descriptions for articles, various media, and documents have emerged and understanding and use of Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) and Dublin Core is becoming increasingly important. The provision of basic bibliographic and citation metadata is no longer enough (Open Archives Initiative; Dublin Core).

Linked Data

The ideas of linked data and the semantic web are also becoming progressively more significant. Instead of maintaining silos of information such as library catalogues and databases, a new semantic web is emerging where the entire web is a database and all data is linked and interconnected when appropriate using machine readable metadata (Miller and Westfall 2011; Nature Linked Data). Machine and human readable data based on World Wide Web Consortium (W3C) standards like the Resource Description Framework (RDF) or the OWL2 Web Ontology Language that permit the use of standardized vocabularies summarizing pertinent information, data, thesis and findings presented in an article is most desirable (D. Shotton 2009; World Wide Web Consortium).

Layout

Many publishers are searching for alternatives to publishing articles as basic Portable Document Format (PDF) or Hypertext Markup Language (HTML) files. They are experimenting with various article layouts that are made possible and desirable by the online environment. Split screens, dialog boxes, pop ups, magnifiers and scrolling sections are some of the new format features that are emerging. PDF and HTML have become familiar forms of presentation of electronic documents and materials on the web, but they are not necessarily well suited for some new article and serial features or in the case of PDF accessibility (Elsevier 2012; Springer 2010).

Delivery

Traditional serials were delivered by traditional means, either in print or as electronic publications to computers. Until recently, most libraries have only concerned themselves with providing access to literature in the library or to home desktop or laptop computers. With new serials and advances in the online environment in general, the new generation of serial users has the expectation that information will be delivered to them wherever and whenever they want on whichever modern device they choose to use at any given moment. Ipads, Ipods, Iphones, Androids, e-readers, laptops, and desktops to name only a few devices, are all in use. Software applications to access, use and benefit from all the new features of new serials are required and must be made available by libraries, publishers or some other providers.

Storage and Preservation

New requirements for storage and preservation of research data, methodologies and the related products of scholarship, are presented by new types of journal articles. Capturing, linking and storing the material and information contained in the new format, content, context and web 2.0 dialogue features is and will continue to be important. Storage space requirements will be huge for multimedia, data and all interconnected pieces, and the items to preserve and store will possibly be spread over the online universe.

Access

With the new journals come many newer forms of access and many requirements for access and reuse. Customary subscription toll access is now only one form of access to scholarly literature and other means have become more desirable. Traditional subscriptions are most frequently only to the finished product and not necessarily to the all related material available on the internet. Patron driven acquisition (PDA) and print on demand of articles are possible alternative solutions to the purchase of journal subscriptions but they are not always desirable solutions for long term access, budgeting, collection building or preservation. Long established access methods and PDA do not automatically give access to or permit discovery of context enrichments, or the dialogue made possible by social networking features available in new serial publications. Open barrier free access and reuse made possible by the online environment is by far the most desirable form of access to scholarly literature and the number of open access publications available is growing rapidly. The Directory of Open Access Journals (DOAJ), that lists many open access publications, currently has over 7662 entries (DOAJ 2012).

There are several types and “flavours” of open access. There are green and gold models of open access with gratis use and libre use and reuse possibilities, as well as publications that are a mixture of toll and open access. The green model of open access involves
Self-archiving or other deposit of the products of scholarly work, and sometimes the data upon which it is based, in institutional or other repositories where the material can be freely accessed and used. The article uploaded to a depository is often the preprint version of an article but sometimes it is the final version of the article uploaded after an embargo period. With the gold model of open access, articles are available on the publication’s website for free but authors often pay publication charges (Crawford 2011).

An open access model of publication of research products and data is now often funder mandated, and research grants and funds frequently pay for author fees and other charges. Many institutions have also created open access funds to cover charges related to open access publishing by their researchers. The change to article level acquisitions for PDA and institutional repositories also has the potential to further change the nature of a serial as a unit because it breaks the unit of purchase down to the article level.

New Roles

Library roles in publishing, acquiring, providing access to and preservation of enhanced and enriched continuing resources are important and evolving rapidly. New serials, the online environment and current upheavals in the scholarly communication system have brought with them new or enhanced roles, responsibilities and challenges for libraries and librarians as open access advocates, journal publishers, managers and supporters of repositories, and copyright, multimedia, Web 2.0, technology, and metadata experts.

Open Access Advocates

The health of the scholarly communication system is of vital importance to the university and therefore to the academic library. Most librarians and many others agree that scholarly communication system can no longer support a publication system where the products of scholarly work are often exhoribantly priced and out of reach, locked behind subscription or other barriers in silos that make the products of scholarly work inaccessible and unavailable for use and reuse to many. Librarians have taken on the vital role of educating users about important issues related to scholarly communication. They have become experts in articulating issues surrounding publishing models, copyright, author rights, journal hosting, preservation, marketing and a plethora of other concerns related to the desirability of open access publishing and access. Libraries are forming partnerships with faculty, journal editors, authors and other stakeholders to find

new solutions and publishing models; and to remove the barriers to access, which is crucial for libraries (Crawford 2011).

Journal Publishers

The role of research libraries as publishers and hosts of scholarly journals is growing rapidly and is an indicator of the value research libraries and others place on finding new methods of supporting scholarly communication. As early as in 2007, an Association of Research Libraries (ARL) study showed that, "by late 2007, 44% of the 80 responding ARL libraries reported they were delivering publishing services and another 21% were in the process of planning publishing service development." (Hahn 2008) Since 2007, many more new library publishing services have emerged. Libraries are generally attemping to provide services based on new open access publishing models, rather than on traditional toll access models with their barriers and the high costs associated with maintaining subscription-based programs.

Numerous types of programs exist and service levels and roles vary greatly among libraries. Some libraries provide an extensive full service publishing program with a suite of other digital services like digital preservation, digital repository and digital humanities programs, whereas other libraries provide services that are very rudimentary and consist of providing consulting services for publishing, or provision of institutional repository services (Jottkandt 2010; Maughan Perry et al. 2011). Some publishing programs involve national partnerships as in the Canadian Synergies program (Devakos and Turko 2007). Financial support and business models also differ from one institution to another. Library support of publishing programs and journal hosting has become less complex than it may have been in the past since open source software like the Public Knowledge Project's Open Journal System (OJS), Cornell University Library's Digital Publishing System (DPubs), and other software to support publishing activities, has become easily accessible (Public Knowledge Project; Cornell University Library 2008).

Repository Support and Hosting

Support for and hosting open access repositories has also become the norm for many academic research libraries. Articulating the benefits of using subject, institutional and other types of repositories, encouraging faculty and researchers to deposit their work in some type of repository, providing the software and support, running repositories, and helping scholars navigate publisher agreements and copyright issues are important roles for libraries. Ensuring adequate metadata is available for discovery of items placed in repositories and that archival arrangements are secure are also important library tasks. Institutional or funding body mandates have enhanced the roles of libraries in many cases in relation to institutional and other types of repositories (Crawford 2011).

Copyright, Multimedia, Web 2.0, Technology and Metadata Experts

New serials, improvements to the Web and technological advances have made it essential for libraries and librarians to assume new tasks in providing expertise and services based on the new technologies and new resources. Librarians have roles to play as experts on copyright and in the use of multimedia and Web 2.0 features, Dublin Core, Open Archives Initiative Protocols for Metadata Harvesting (OAI-PMH) and other harvesting and metadata schemas, as well as roles to support and update software used for journal publishing, repository management and other library functions (Calhoun 2007). Continual upgrades to publishing, repository and archival software, as well as constant data migrations, are required in order produce publications that keep up with advances in context, content, social networking and other new serials features. Providing tools and support for discovery services like Summon, Ebsco Discovery Service, Primo Central or WorldCat Local as well as a host of other tools like blogging tools to support new serials and scholarly communication are now roles for librarians (Anderson and Dresselhaus 2011; D. Shotton 2012).

New Issues

It is important for libraries to examine significant developments in serials publishing and scholarly communication on an ongoing basis and to proactively offer solutions to issues that arise. Some of the many issues of current concern to serialists include finding and developing the best collections from the vast amount of resources available, ensuring long term preservation and access to serials, articles and data that are spread across the online universe, ensuring adequate archiving and preservation of national and government research data and products, and educating and communicating with patrons on copyright and other information issues. Issues also include supporting production of new serials that require more advanced software than is currently in use in many operations, and supporting the software and large storage requirements for the production, maintenance and archiving of new types of publications. Important concerns for libraries and librarians also involve finding ways to encourage scholars to change their publishing patterns, providing evidence of the comparative value of publications produced by various publication models, and helping scholars to embrace new modes of scholarly communication, open access models, and repository development and growth.

Money is of course an ongoing issue for libraries, publishers, knowledge producers and users. For libraries, finding funding models to support scholarly communication activities like publishing services and repository support, finding funding for content and access to information through traditional and other means, finding funding for metadata creation, for standard creation and implementation, for discovery tools, providing delivery to multiple devices and developing appropriate technological infrastructures are

current and ongoing issues. Finding funding for staffing to provide service and to perform all of the functions required to support current and future library activities is also a major concern for most libraries. Many services face difficulties as a result of becoming so popular that they have difficulty maintaining service levels. For libraries as publishers, issues also include the need to support the publication of content and data in different formats, features and languages. Creating new and enhanced partnerships and collaborations with faculty and other users, other libraries, research centres, museums, graduate schools, IT departments, publishers, university presses is also increasingly important. It is essential for libraries to examine significant developments in serials publishing, to proactively offer solutions to issues that arise.

Conclusion

There are many issues related to the new serials and new roles for libraries and librarians. Serialists have developed the knowledge and expertise to address most of the issues that are developing in the 21st century. The issues centre around preserving, organizing, educating, collaborating, communicating, discovery, access, archiving, software, funding, collection development, copyright and developing or using various metadata schema. These are issues and challenges that librarians and libraries are prepared for and have gained considerable expertise in addressing. The knowledge and skills required to address the issues are all within the librarians toolkit and therefore librarians need to take an active role working through the challenges and issues that arise. The issues are very familiar but the context has evolved. Libraries and librarians are ready to face the future. It includes new serials and new roles but familiar issues. Serialists need to be in the forefront as the new serials world unfolds.

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